

ANNALS *of* PHYSICS

Editor

Herman Feshbach

Assistant Editors

Henry Ehrenreich

Roman W. Jackiw

Arthur M. Jaffe

William H. Press

Editorial Council

J. D. Bjorken

P. G. De Gennes

J. Eisenberg

L. D. Faddeev

G. Field

S. Hanna

V. Hughes

L. Kadanoff

B. Mottelson

C. K. N. Patel

J. Peoples, Jr.

E. Picasso

I. I. Shapiro

D. H. Wilkinson

K. Wilson

Founding Editors

Philip M. Morse

Bernard T. Feld Herman Feshbach Richard Wilson

VOLUME 159 • 1985



ACADEMIC PRESS, INC.

(Harcourt Brace Jovanovich, Publishers)

San Diego Orlando New York London

Toronto Montreal Sydney Tokyo

Copyright © 1985 by Academic Press, Inc.

ALL RIGHTS RESERVED

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1985 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0003-4916/85 \$7.50

CONTENTS OF VOLUME 159

NUMBER 1, JANUARY 1985

MICHAEL F. BARNSELY AND GIORGIO TURCHETTI. A Study of Boltzmann Energy Equations	1
LOWELL S. BROWN. Geonium Lineshape	62
KUNIO YASUE AND JEAN-CLAUDE ZAMBRINI. A Cinematic Study of Quantum Kinematics	99
W-Y. P. HWANG AND G. E. WALKER. Meson-Exchange Currents Including Energy Transfer Effects	118
H. FESHBACH. Energy Averaging and the Statistical Multistep Direct Process	150
BARRY SIMON. Almost Periodic Schrödinger Operators. IV. The Maryland Model	157
MICHAEL S. SCADRON. Nuclear Pairing and Dynamical Breakdown of Isospin Symmetry	184
R. ZUCCHINI. Asymptotic $\hbar^{1/2}$ -Expansions in Classic Particle Limit of Non-relativistic Quantum Mechanics	199
N. S. MANTON. The Schwinger Model and Its Axial Anomaly	220
ABSTRACTS OF PAPERS TO APPEAR IN FUTURE ISSUES	252

NUMBER 2, FEBRUARY 1985

W. STOCKER AND M. FARINE. Perturbational Approach for the Curvature Correction to the Surface Tension via the Hartree-Fock Approximation for the Plane Surface	255
J. A. BULLINARIA. Arbitrary Spin Fermions on the Lattice	272
WANG SHUN-JIN AND W. CASSING. Explicit Treatment of N -Body Correlations within a Density-Matrix Formalism	328
HORACIO D. SIVAK. Fluctuations in the Relativistic Quantum Plasma	351
N. S. CRAIGIE, V. K. DOBREV, AND I. T. TODOROV. Conformally Covariant Composite Operators in Quantum Chromodynamics	411
ALFRED ACTOR. Compactification at Finite Temperature in Noncompact Electrodynamics	445
JOSEPH N. GINOCCHIO. A Class of Exactly Solvable Potentials. II. The Three-Dimensional Schrödinger Equation	467

ERRATUM

Volume 157, Number 2, October 15, 1984; L. P. Horwitz and L. C. Biedenharn, "Quaternion Quantum Mechanics: Second Quantization and Gauge Fields," pp. 432-488	481
ABSTRACTS OF PAPERS TO APPEAR IN FUTURE ISSUES	482
AUTHOR INDEX FOR VOLUME 159	485

